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The year 2015 was characterized by an unfavorable economic environment, particularly in traditional industry and, more specifically, in industrial investment.

For Mersen, this situation was reflected in sales of €772 million, an increase of more than 6% compared to the previous year, but down 2.2% on a like-for-like basis.

However, the year confirmed the solid performance of our expanding markets –renewable energy, electronics and aeronautics.

Despite the business contraction, the Group delivered an EBITDA margin of 12.7% under challenging conditions, thanks in particular to the benefits of the operational excellence plans and, particularly, the Transform plan. This was completed at the end of December 2015, in line with the schedule, costs, and gains projected initially. This strong performance is due to the efforts of all the teams involved.

We ended the year with a solid financial position and an optimized debt profile. Our credit lines have maturity in excess of four years, which provides Mersen with the resources to implement its strategy. The Group remains focused on generating cash flow. Each manager within our organizations is working to meet this objective.

The economic environment in 2016 is likely to remain sluggish. However, the Group can rely on its expanding markets (particularly renewable energy and electronics), its ability to bring innovations to the market quickly, and its ability to seize opportunities in certain areas, to develop and offset the slowdown in traditional industries. We will also continue our search for targeted acquisitions to expand our offering and accelerate our development.

We will continue to improve industrial efficiency, aided in that effort by the new organization that we established in early 2016. This will allow us to optimize the use of our industrial equipment, while increasing efficiency with respect to our customers. We are also set to launch an ambitious operational efficiency plan to boost our productivity. Mersen is adapting to the current economic context by relying on its strengths and values.

Luc Themelin  
Chairman of the Management Board

## CORPORATE DATA

Note:

Data for 2015 and 2014 are presented in accordance with IFRS5, in light of the plan to divest a brazing technology business.

### Financial highlights

(in millions of euros except ratio)	2015	2014	2013	CAGR 13-15
<b>Consolidated sales</b>	772	726	739	+2%
<b>Operating income before non-recurring items</b>	58.1	59.6	59.8	-1%
<i>operating margin</i>	7.5%	8.2%	8.1%	
<b>EBITDA</b>	98.0	95.7	100	-1%
<i>EBITDA margin</i>	12.7%	13.2%	13.5%	
<b>Net income (Group share)</b>	1.3	2.1	(29.2)	
<b>Cash-Flow from operating activities <sup>(1)</sup></b>	73	79	86	
<b>Capex</b>	34	32	28	
<b>Net debt at year-end</b>	237	216	212	
<b>Net debt to equity ratio</b>	47%	46%	45%	
<b>Net debt to EBITDA ratio</b>	2.39	2.19	2.07	
<b>Return On Capital Employed <sup>(2)</sup></b>	7.0%	7.8%	7.4%	

(1) before Capex, continuing activities - before exceptional items

(2) Operating income before non recurring items and before tax/ Average Capital Employed

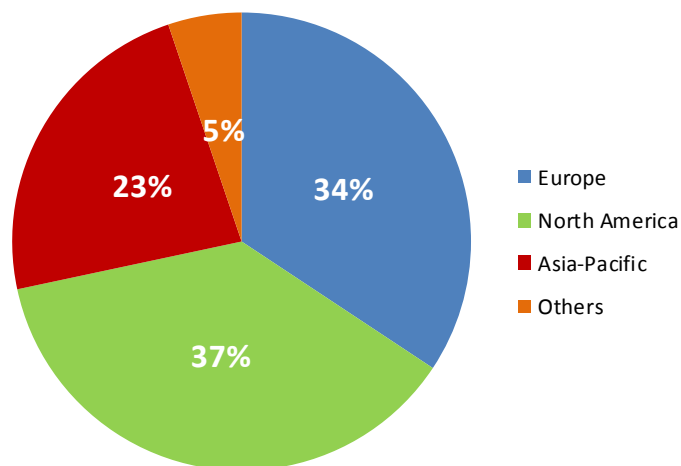
- **High EBITDA:**
  - High added value
  - Ability to adjust costs to level of sales
- **High level of cash-flow generation:**
  - Average annual cash-flow from operating activities (before exceptional items): €80 million
  - Free cash-flow yield (excluding exceptional items): 6.7% average 2013-2015

- **Capex significantly lower than in the past:**
  - End of significant capex period in 2012, especially in the material segment
  - No further large investments needed
- **Solid debt structure:**
  - Net debt/EBITDA below 2.5 (bank covenant at 3.50)
- **Low level of ROCE but high leverage**
  - Low level due to low level of industrial capacity utilization in graphite (material segment)
  - High ROCE in the Electrical segment
  - No further large investments needed

See appendix for comprehensive historical consolidated statements.

## Sales by geography

2015 sales breakdown:



(in millions of euros)	2015	2014	2013	CAGR 13-15
<b>Consolidated sales</b>	772	726	739	+2%
Europe	265	279	282	-3%
North America	288	253	262	+5%
Asia-Pacific	179	161	157	+7%
Other	40	34	38	+2%

- **Asia is back to growth** after 2 years of decrease linked mainly to the solar market. The growth is led by South Korea, Taiwan and India.
- **North America had been favorably impacted** by strong USD in 2015 but suffered from reduced investment especially in oil & gas industries.
- **Erosion of the sales in Europe.**

## Global footprint

Mersen has developed an industrial and commercial network that allows it to build close relationships with leading industrial groups around the world.

In 2014, the Group announced the launch of “Transform”, a global plan to optimize the Group's operational efficiency by adapting its efforts in the most promising geographic areas, and by improving the Group's flexibility in order to better match its economic environment.

Deployed over 2014 and 2015, this industrial optimization program involved transfers of production and a reduction in the number of sites, in Europe, in the United States and in China.

(in number of employees)	2015	2014	2013
<b>Total workforce</b>	6,375	6,368	6,382
Europe	2,246	2,301	2,300
North America	1,937	1,948	1,951
Asia-Pacific	1,657	1,569	1,645
Rest of the world*	535	550	486

\* Africa and South America

Mersen's employees are located in about 33 countries around the world. This worldwide presence ensures a close relationship with customers, fosters collaboration at the very early stages of new projects and enables teams to respond rapidly to new developments.

## Share information

	2015	2014	2013
<b>Shares outstanding</b>	20,692,054	20,616,814	20,816,364
<b>Price per share</b>			
- <b>High</b>	26.45	27.88	27.14
- <b>Low</b>	16.20	17.50	16.44
- <b>Year-end</b>	17.00	20.12	25.19
<b>Trading volume</b> (daily average)	16,030	14,602	30,074
<b>Market capitalization (YE in €m)</b>	352	415	524
<b>Enterprise Value (YE in €m)</b>	589	631	736
<b>EV/EBITDA (YE in €m)</b>	6.0	6.6	7.4

Source: Euronext

	2015	2014	2013
<b>Earnings per share (€)</b>	0.07	0.10	(1.43)
<b>Earnings per share (€)</b> (continuing operations)	0.24	0.09	(1.24)
<b>Dividend per share (€)</b>	0.50	0.50	0.45
<b>Yield (based on YE share price)</b>	2.9%	2.5%	1.8%
<b>Pay-out ratio (on continuing activities)*</b>	<b>36%</b>	<b>34%</b>	<b>36%</b>

\* excluding non recurring items

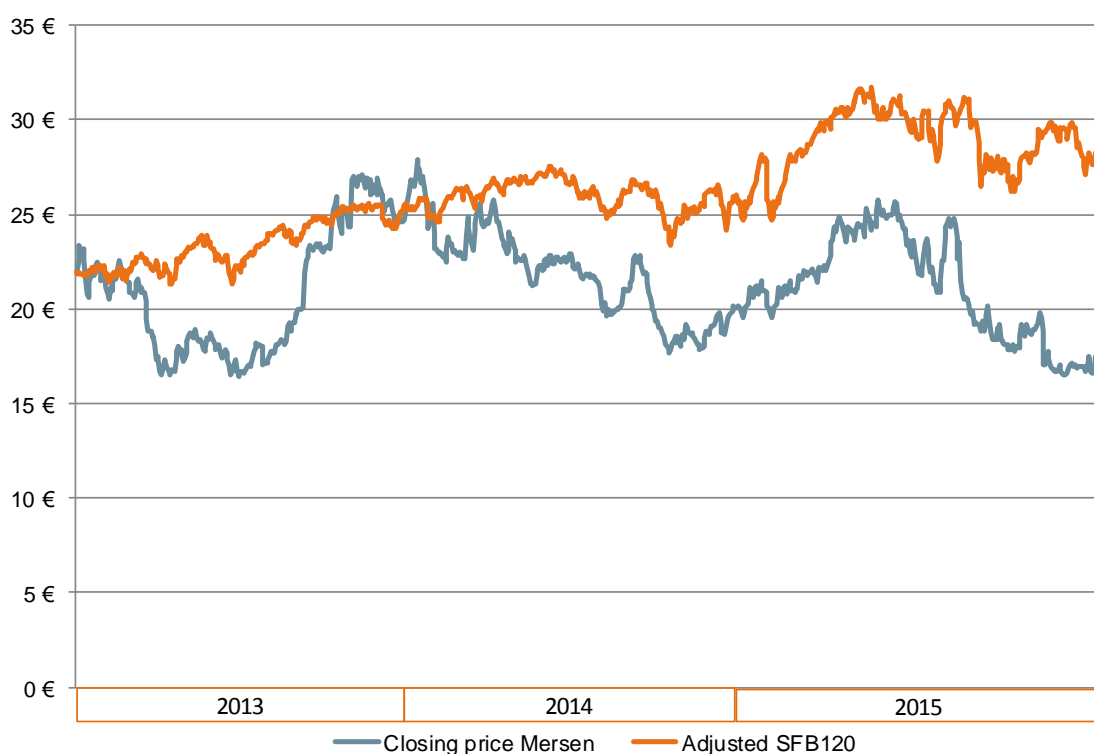
- A consistent **dividend policy**
  - An average pay-out ratio around 35% since 2009
  - *For the period, the pay-out ratio is calculated before the impact of exceptional items.*



## Share performance

Mersen's share price performance over the period has been largely influenced by the global macroeconomic crisis and by overcapacities in the graphite industry.

Performance compared with the SBF 120 index:



## Shareholding structure

	2015	2014	2013
ACF Investment	17.5%	17.6%	17.4%
FSI/CDC	15.3%	15.4%	15.2%
Sofina	8.1%	8.1%	8.1%
T-Rowe	5.0%	5.0%	
Other French institutional investors	14.9%	15.8%	14.9%
Other international institutional investors	24.9%	26.7%	28.2%
Individuals*	13.7%	10.9%	14.1%
Treasury shares	0.5%	0.5%	1.2%

\* includes employees

- At December 31, 2015:
  - French institutional investors represented an aggregate 47.8% of shareholdings.
  - International institutional investors represented an aggregate 38.0% of shareholdings.

## BUSINESS SEGMENTS

Mersen provides technical and technology-based solutions to a large number of customers through its two areas of expertise: Materials and Electrical.

To maintain its expert edge, Mersen drives innovation in its two business segments through close cooperation with customers. This requires a detailed understanding of their challenges, environments and applications, and the ability to develop highly sophisticated products and develop unique components to meet the specific needs of the leading players in each of our markets.

At Mersen, innovation is backed by powerful resources. Knowledge and best practices are shared across our R&D teams, who are organized into specialized labs coordinated by a cross-divisional committee. The labs are equipped with state-of-the-art facilities, able to reproduce customer environments and conditions of use.

(in millions of euros)	2015	2014	2013	CAGR 13-15
<b>Total consolidated sales</b>	<b>772</b>	<b>726</b>	<b>739</b>	<b>+2%</b>
Materials	283	275	300	-3%
Electrical	489	451	439	+6%
Materials	37%	38%	41%	
Electrical	63%	62%	59%	

Materials segment growth has been affected by a sharp decline in solar since 2011 and a low-cycle in capex for the chemical industries in 2014.

Electrical segment posted a slight growth over the period mainly thanks to power electronics and wind energy market dynamics.

## Change of organization

On December 2, 2015, Mersen announced changes to its internal organizational structure based on the priorities set out in its development strategy: concentration on key expertise, innovation and growth markets. Two new business segments are created:

- the Advanced Materials segment brings together three businesses related to carbon materials – graphite specialties for high-temperature applications, anti-corrosion equipment designed primarily for chemicals and power transmission technologies.
- the Electrical Power segment brings together two businesses related to the electrical market – solutions for power management (power electronics) and electrical protection and control.

The reorganization will enable the two segments to optimize their industrial and human resources and align their respective businesses more effectively with the needs of their different end markets.

The Group's reporting will be modified only in 2016 to take into account its new organizational structure.

### Materials

Mersen offers a range of equipment based on carbon and high-performance materials – including graphite, reactive metals, C/C composite and silicon carbide- for extreme environments that require resistance to high-temperatures and corrosion.

Markets served include energy, electronics, chemicals & pharmaceutical, transportation and process industries.

Mersen ranks:

- N°1 worldwide in graphite-based anti-corrosion equipment.
- N°2 worldwide in high-temperature isostatic graphite applications.

Mersen's expansion strategy is mainly led by organic growth through selective investments tailored to demand, particularly in solar energy and electronics.

### Product and service portfolio:

Resistance to high temperatures:

- High temperature thermal insulation carbon felt
- Purified and coated graphite parts
- Sintered silicon carbide products
- Carbon/Carbon Composite products

Resistance to corrosion:

- Pressure vessels
- Columns
- Heat exchangers
- HCl Anticorrosion systems

### Competitive advantages:

- An integrated player (from semi products to finished goods) with a complete material offer
- Expertise in materials and manufacturing processes (graphite formulation, reactive materials brazing and soldering).
- In-depth understanding of customer applications.
- Co-development with customers.
- Global network of local units.

### Main facilities:

- Europe :
  - Gennevilliers (France): Graphite machining, coating and purification
  - Holytown (UK): Insulation felts
  - Pagny sur Moselle (France): Anti-corrosion equipment

- Asia
  - Chongqing (China): Graphite
  - Yantai (60% JV - China): Graphite machining
  - Xianda (Chine): Anti-corrosion equipment
- North-America
  - Bay City (USA): Graphite machining, coating and purification, silicon carbide
  - Greenville (USA): Graphite machining
  - Salem (USA): Anti-corrosion equipment
  - St Marys (USA): Graphite

### **Main competitors:**

- SGL Carbon – Graphite Specialties (Germany): Graphite and fluoropolymer equipment
- Toyo Tanso (Japan): Isostatic graphite
- Tokai Carbon – Fine Carbon (Japan): Isostatic graphite
- Schunk – Graphite (Germany)

### **Main changes in the scope of consolidation over the past five years:**

*(By date of consolidation or de-consolidation)*

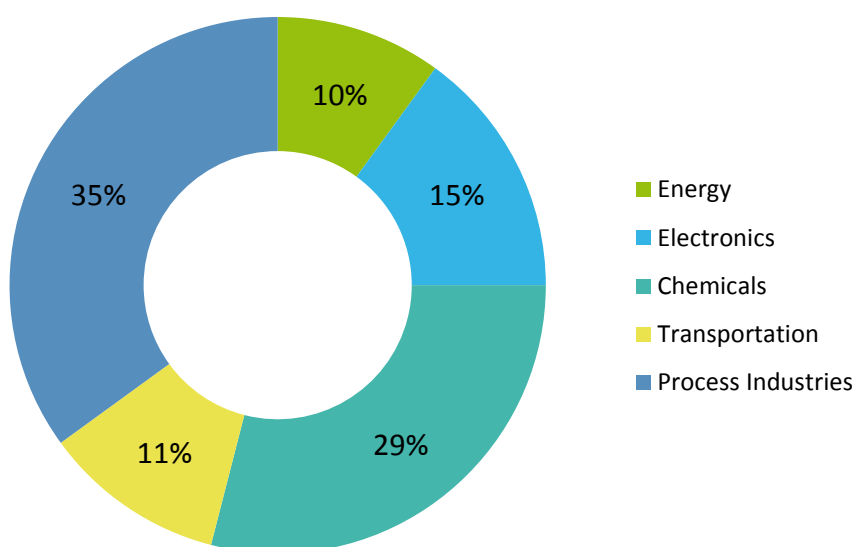
- 2013:
  - July-November: Withdrawal from metal boilermaking equipment for nuclear power stations, metal plate heat exchangers and mixers.
- 2014:
  - Withdrawal from carbon steel equipment business in China.
- 2015:
  - Increased stake (from 85% to 95%) in Mersen Boostec dedicated to Silicon Carbide
  - Decision to sell an activity in the brazing technologies

### Key figures

	2015	2014	2013
<b>Total sales</b>	283	275	300
Operating income before non-recurring items	11.3	18.0	19.7
<i>As a % of sales</i>	4.0%	6.5%	6.6%
<b>EBITDA</b>	38	42.2	47.7
<i>As a % of sales</i>	13.4%	15.3%	15.9%

- **High EBITDA margin:** around 15%
- **High cash generation** (strong EBITDA)
- Operating Margin affected by low level of sales
- **Strong leverage on EBIT** (particularly considering the current low capacity utilization rate)

### Targeted markets (2015 sales breakdown)



### Electrical

Mersen offers components, systems and services that make electrical power safe, reliable and efficient for Original Equipment Manufacturers and their end users. These solutions are dedicated to three key applications:

- Power Transfer Technologies
- Electrical Protection & Control
- Solutions for Power Management

Markets served include energy, electronics, transportation and process industries.

Mersen ranks:

- N°1 worldwide in carbon brushes and brush-holders for industrial electric rotating machines
- N°2 worldwide supplier of industrial fuses and fusegears

The Electrical segment's strategy is based on maximizing mature products (such as fuses and fusegears, brushes and brush-holders) thanks to strong market shares and an optimized manufacturing model and on expanding growth products (such as power electronics components, windpower solutions and surge protection devices) through breakthrough innovations and bolt-on acquisitions.

#### Product and service portfolio:

Power Transfer Technologies:

- Carbon brushes and brush-holders
- Slip ring assemblies
- Signal transfer systems

Electrical Protection & Control:

- Fuses & Fusegears
- Surge protection devices
- Current collection and switches for rail vehicles

Solutions for Power Management:

- Cooling devices
- Laminated busbars
- Semi-conductor fuses

#### Competitive advantages:

- Largest offer compliant with a variety of electrical standards.
- Efficient worldwide distribution and logistics network.
- Design capabilities and in-depth understanding of applications.

### Main facilities:

- Europe
  - Amiens (France): Brushes, brush-holders
  - Angers (France): Laminated busbars
  - St Bonnet de Mure (France): Fuses, fusegears, electronic systems, rail vehicles components
  - Hittisau (Austria): Slip ring assemblies, brush-holders
- Asia
  - Bangalore (India): Multiproduct facility (fuses, fusegears, brushes, ...)
  - Seoul (South Korea): Multiproduct facility
  - Shanghai (China): Multiproduct facility (cooling devices, laminated busbars, brushes,...)
  - Wenzhou (China): Fuses and fusegears
- Americas
  - Boonton (USA): Brushes
  - Newburyport (USA): Fuses & fusegears
  - Rochester (USA): Laminated busbars
  - Dorion (Canada): Brush-holders, slip ring assemblies
  - Toronto (Canada) : Cooling devices & High power switches
  - Sao Paulo (Brazil): Multiproduct facility (brushes, ...)
  - Juarez (Mexico): Fuses & fusegears
- Africa
  - Tunis (Tunisia): Fuses & fusegears
  - Johannesburg (South Africa): Multiproduct facility (brushes, ...)

### Main competitors:

- Morgan Advanced Materials (United Kingdom): Brushes, brush-holders, slip-ring assemblies, signal transfer systems, etc.
- Eaton/Cooper Industries (United States): Fuses (Bussmann)
- Schunk (Germany): Brushes, brush-holders, pantograph strips, etc.
- Rogers (USA) : Laminated busbars

### Main change in the scope of consolidation over the past five years:

*By date of consolidation or de-consolidation*

- 2012:
  - January: Acquisition of Eldre (USA), a world leader and pure player in laminated busbars.
- 2014:
  - February: Majority stake in Cirprotec (Spain), a specialist in lightning and overvoltage protection (SPD).
- 2015:
  - December: Acquisition of ASP (China), a Chinese leader manufacturer of Surge Protection Devices

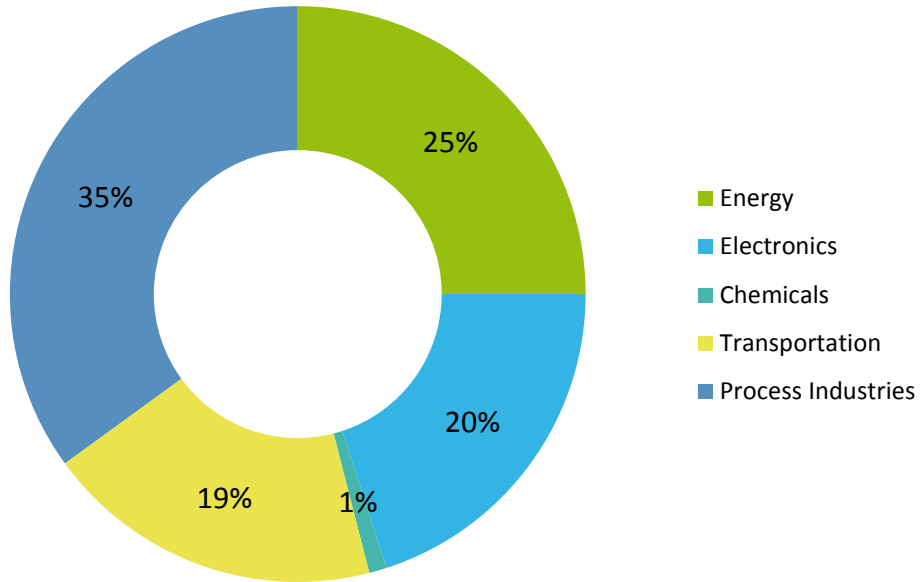
### Key figures

(in millions of euros)	2015	2014	2013
<b>Total sales</b>	489	451	439
Operating income before non-recurring items	60.0	55.4	51.0
<i>As a % of sales</i>	12.3%	12.3%	11.6%
<b>EBITDA</b>	72.9	67.1	62.9
<i>As a % of sales</i>	14.9%	14.9%	14.3%

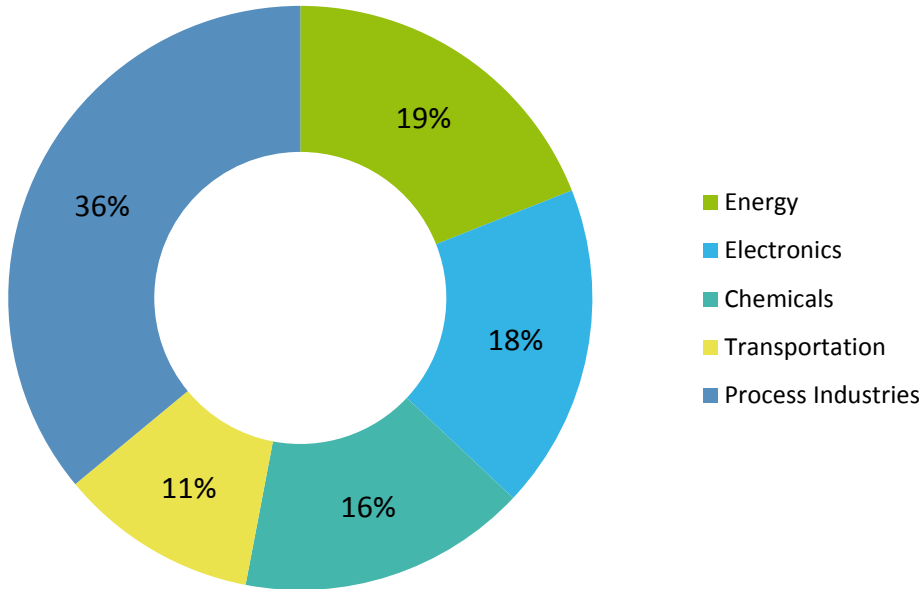
- **High and stable EBITDA margin:** between 14% and 15%
- **Growth in sales and operating income** over the period
- **High ROCE (>15%)** due to low capital intensive business



**Targeted markets (2015 sales breakdown)**



## MAJOR MARKETS



2015 sales breakdown

### Energy

To support the fast-track development of alternative energies –a key solution to the combined challenges of unrelenting growth in energy demand, long-term depletion of cheap fossil fuel reserves and climate change – competitiveness-enhancing technological advances are crucial.

Mersen is developing new technological solutions that facilitate the use of renewable energies while enhancing their cost-effectiveness.

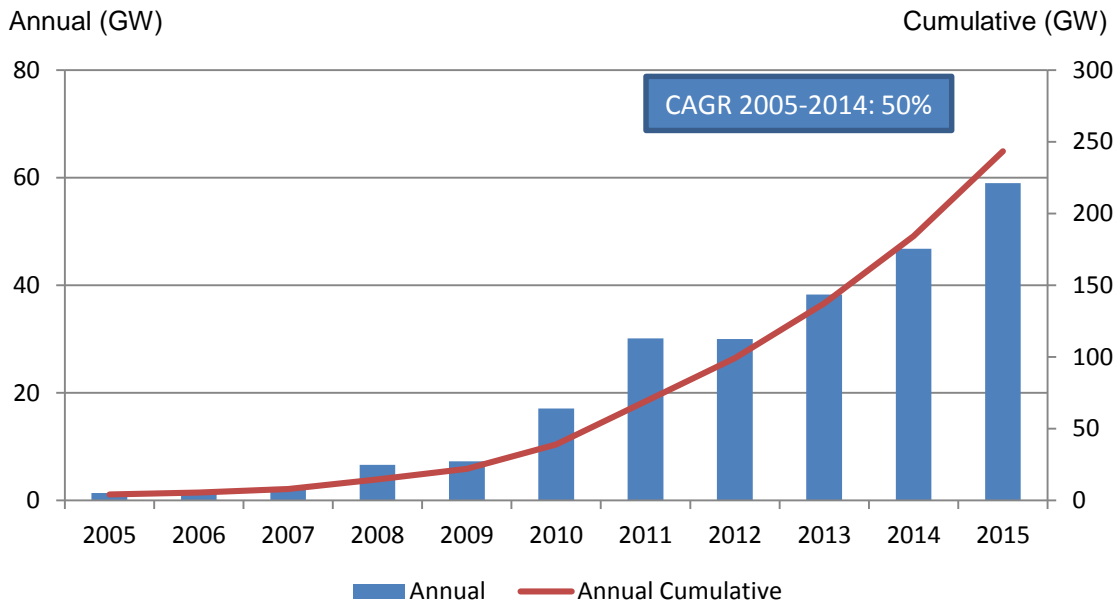
Mersen also provides a host of solutions for conventional energy installations. Certified by the leading turbo-generator manufacturers, our instruments and devices have made us a leading source of equipment for thermal power stations.

### Solar

#### A) Thus, an established industry

After a decade, photovoltaic technology has demonstrated its ability to become a major source of power generation worldwide. At the end of 2015, more than 240 GW were installed globally. New installations in 2015 reached 59GW, an increase of 26% compared to 2014 with China taking the lead as the number 1 country for new installations (16.7GW) followed by Japan (10.6GW) and the United-States (7.8GW).

In terms of cumulative global installed capacity,



Source Photon Consulting – September 2015

## B - A broad offering across the value chain

Mersen is active across the complex solar cell manufacturing process and is helping to make the industry more competitive:

- Manufacture of polysilicon (1): Complex graphite components (potentially SiC coated) and equipment that can withstand extremely demanding environments during the transformation of quartz into polysilicon rods.
- Ingot production (2): Furnace linings, machined graphite parts, furnace insulation.
- Doping and surface treatments (3): Graphite and composite material equipment.
- Power connection of solar panels (4): Fuses, fusegears, electronic systems, surge protection devices, combiner boxes.
- Power electronics (solar inverters for grid connection): Cooling devices, laminated busbars, fuses



## C – A large customer portfolio

Mersen serves hundreds of customers around the world, among them (in alphabetical order).

### Polysilicon manufacturers

- GCL
- Hemlock
- OCI Korea
- Wacker Chemie

### Ingot/Cell manufacturers

- Longi
- REC Solar
- Trinasolar
- Yingli Solar

### Installation of solar panels

- Shoals, SunPower, Juwi (turn-key installers)
- SMA, Power One, Omron, TMEIC (inverters)

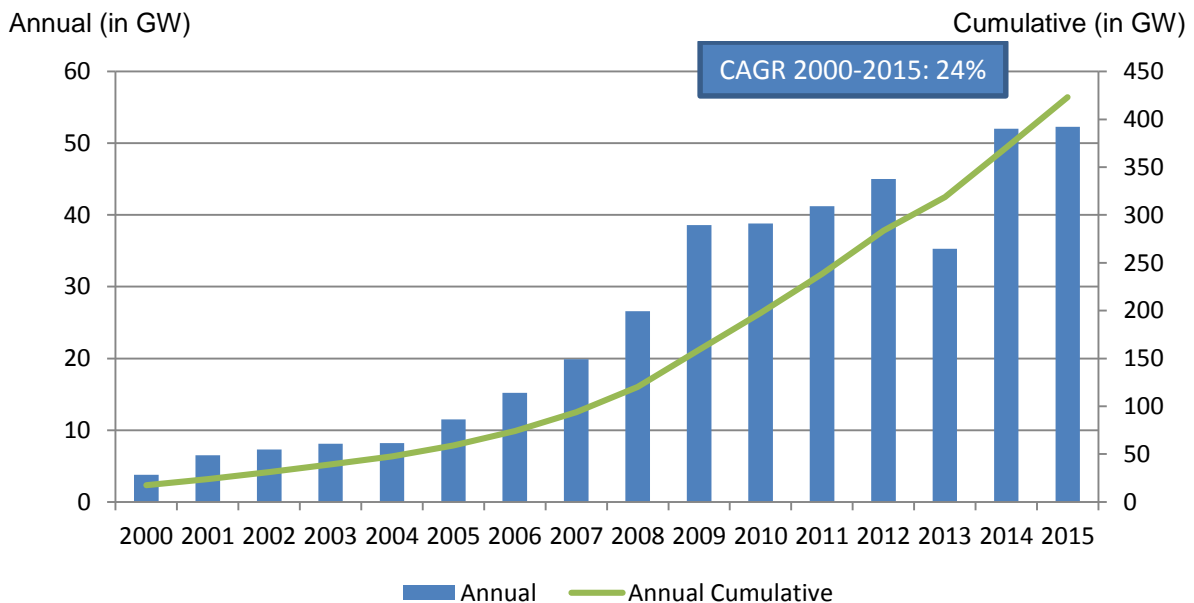
## Wind

### A) A growing market

Rising environmental awareness among the general population and national governments combined with international political will, a favorable legislative and regulatory environment and continuous technological improvements have played a major role in the wind market's expansion.

Since 2000, the market has grown by an average 24% a year. After a sound 2012 year boosted by the US anticipation of the end of government subsidies, 2013 showed a decline in annual installation. In 2014 and 2015, installations were at a record level (52 GW).

As far as installed base is concerned, the market has reached a record level of 423 GW at the end of 2015. This means a highly attractive replacement market where Mersen has strong positions, especially in the United States.



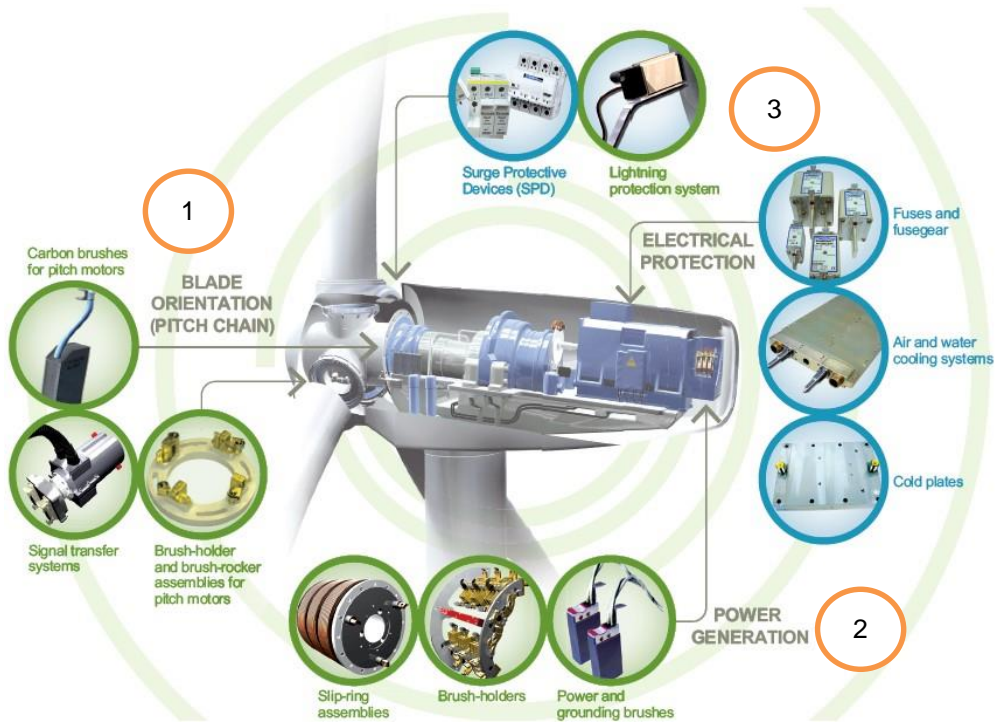
Source: GWEC (Global Wind Energy Council) - Global Wind Statistics

### B) Solutions to enhance efficiency, reliability and safety

Mersen is a benchmark supplier to the windpower industry, serving both the OEM and replacement markets. Our lineup of solutions and services helps our customers to enhance their efficiency, reliability and safety:

- Blade orientation (1): Signal transmission systems to enhance efficiency of output of windpower, brush and brush-holders for power transfer
- Power generation (2): Slip ring assemblies, brushes and brush-holders for power transfer
- Power distribution (3): Fuses, fusegears

- Power electronics (inverters for grid connection) : Cooling devices, laminated busbars, fuses
- Maintenance and other services



## C) High quality customers

Mersen serves a number of customers around the world, among them (in alphabetical order):

- ABB
- Danfoss
- General Electric
- Gamesa
- Goldwind
- NAWSA
- NextEra
- Siemens
- Sinovel
- Suzlon
- Vestas

## Hydropower

### A) The largest source of renewable energy

Hydropower refers to electrical energy generated by turbines that are driven by flowing water in rivers or lakes, with or without man-made dams forming reservoirs.

The top 5 largest markets for hydropower in terms of capacity are China, Brazil, the United States, Russia, and Canada, with China far exceeding the others. There are three hydroelectricity plants larger than 10 GW: the Three Gorges Dam in China, Itaipu Dam in Brazil, and Guri Dam in Venezuela.

### B) A complete lineup for hydro generator performance

Mersen offers the hydroelectric industry a broad range of tailored services, as well as reliable electrical, mechanical and sealing solutions. These include:

- Brush and brush holders for generators
- Slip rings
- Carbon dust collection systems
- Services

### C – A large customer portfolio

Mersen works with hydroelectric power utilities and their critical OEM suppliers, among them (in alphabetical order):

#### Hydroelectrical power utilities

- EDF
- Enel Green Power
- Hydroelectric Power Corporation of India
- Iberdrola
- Three Gorge Corporation
- US Bureau of reclamation

#### Generator OEM

- Alstom
- Andritz
- BHEL
- Electrosila
- Jeumont
- Koncar
- Voith Hydro

## Conventional Energies

Conventional energies include oil, natural gas and coal/peat.

### A) Coal: A growing market in the BRIC regions

According to IEA (International Energy Agency), coal provides around 29% of global primary energy needs. China is by far the world top producer with close to 50% of the worldwide production. India is number 3 with 8% of total production.

Over the coming decades the global fuel mix is likely to change, although fossil fuels will remain the dominant source of energy.

### B) An offer focused on power generation and power conversion

Mersen's solutions for conventional energies focus primarily on power generation and power conversion. Solutions are tested for optimum performance in variable loads and environmental conditions, helping customers to reduce maintenance costs. Mersen has the expertise to reengineer existing solutions and create maintenance tools to improve performance.

- Power generation: Brushes and brushholders for power transfer, brush gear housing (complete metal boxes, designed according to the brushgear specification and air flow calculation), slip-rings.
- Power conversion: Fuses and other components.
- Maintenance and other services.

### C) A diversified customer base

Mersen serves both motor and generator manufacturers and distribution system operators, among them (in alphabetical order):

Motor and generator manufacturers

- ABB
- Alstom
- Electrosila
- General Electric
- Siemens

Distribution system operators

- EDF



## Electronics

The shift from fossil fuels to renewable energies and the pressing need to enhance energy efficiency are spurring the development of power electronics and low energy consumption electronic components.

From microprocessors to LEDs, new applications are constantly being found for semiconductors. Mersen is active in both the upstream and downstream segments of the electronics market:

- Upstream, we equip the world's leading semiconductor manufacturers with ultra-pure graphite components that help ensure optimal efficiency in their fabrication processes and high quality of their products.
- Downstream, we contribute to energy efficiency with bundled power electronics solutions combining busbars, fuses and cooling devices.

### Components for semiconductor manufacturers

#### A – Significant market growth in the past and for the future

In past decades, growth in the electronics market was mainly driven by widespread demand for computers, which use silicon-based semiconductors.

Today, the market is being led by:

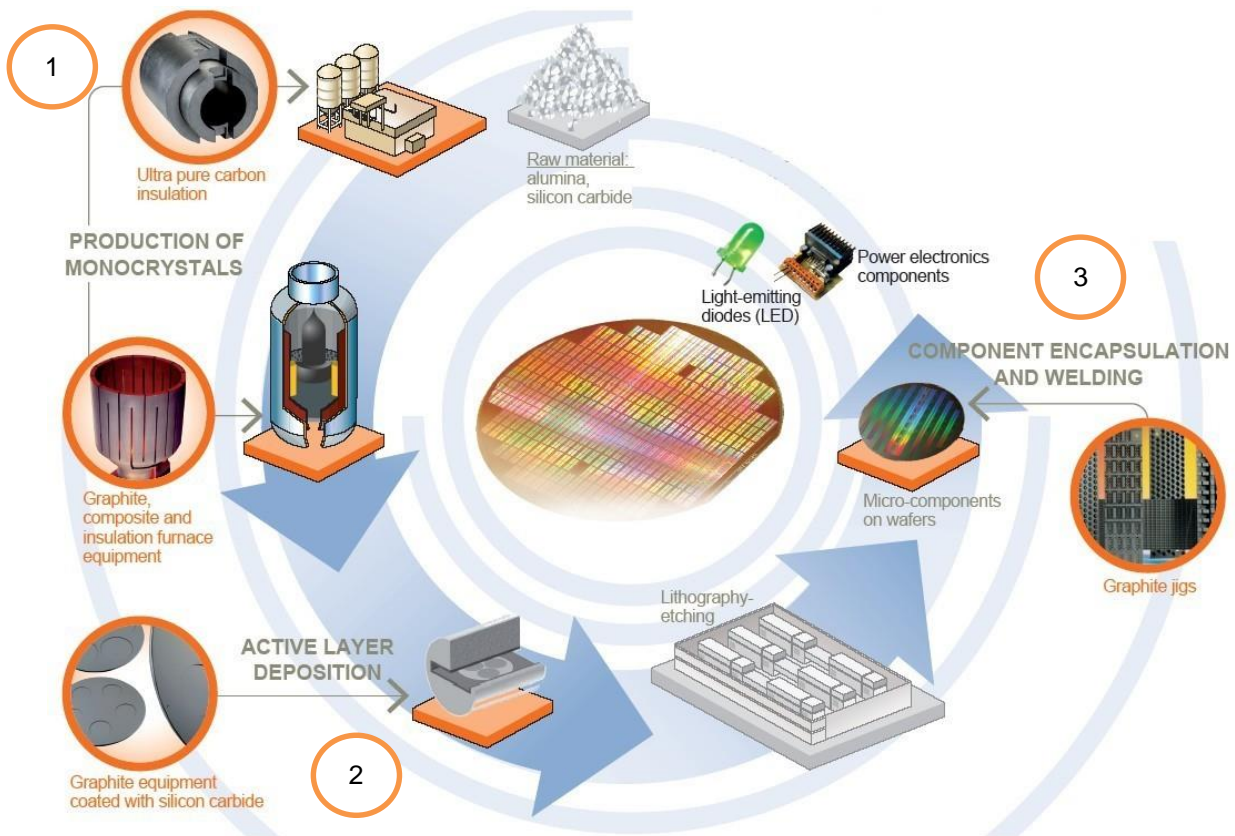
- Mobile communications, with flat screens, smartphones, tablets and wireless connectivity.
- Data networks, with data storage, computing power, cloud computing and optical fiber.
- Energy efficiency, with low-energy lighting (LEDs), power grids and speed drives.

More and more, these applications require non-silicon-based semiconductors, with an increasing need for power, efficiency and miniaturization.

#### B – Increasingly sophisticated graphite products for new substrates

Mersen is active across the semiconductor manufacturing process and is helping to make the industry more efficient.

- Production of monocrystals (1): Complex graphite components (heaters, crucibles...), furnace linings and ultra-pure carbon insulation equipment that can withstand high temperatures during the monocrystal growth process.
- Active layer deposition (2): Ultra-pure graphite wafer carriers (potentially SiC coated) to handle high-temperature and corrosive treatments.
- Component encapsulation and welding (3): High precision graphite and composite machined jigs resistant to oxidation and abrasion.



## C) Main customers

Mersen serves a number of component manufacturers and OEMs around the world, among them (in alphabetic order):

### Component manufacturers:

- Cree
- Infineon
- Samsung
- STMicroelectronics

### OEMs

- Aixtron
- Applied Materials
- GT Advanced Technologies
- Veeco

## Power Electronics

The basic function of power electronics is to convert electrical power as efficiently as possible. This means providing the appropriate energy for each application and converting energy with the best possible performance between input and output, at the right cost to achieve the expected benefit.

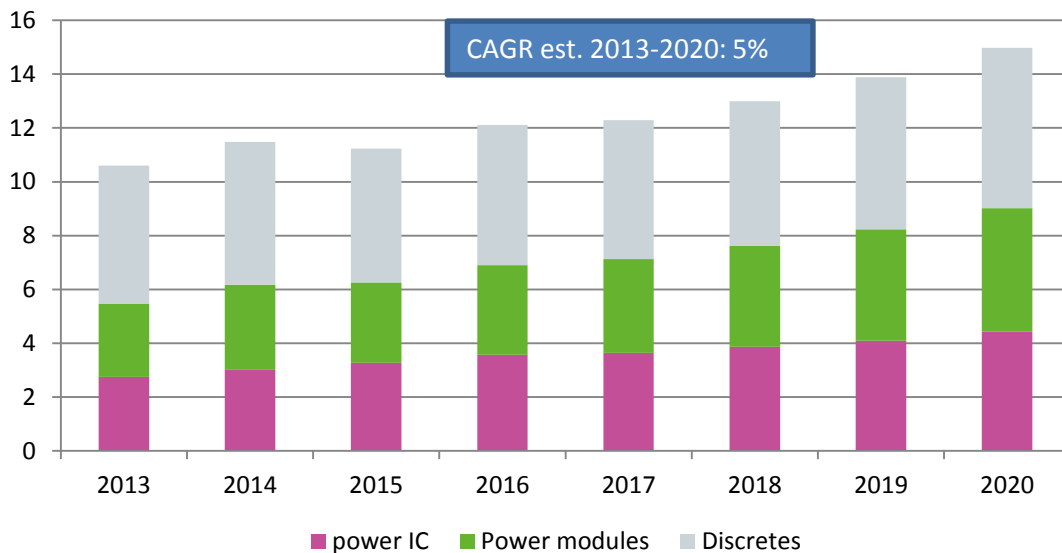
Although the need for energy is widespread, Mersen focuses solely on high-end applications.

In the energy and transportation markets, for example, power conversion is required at the generation (from solar, wind, and other energy source) to grid stage and at the grid (or battery) to consumer stage (for transportation). Power conversion is also crucial in a large number of industries and in the IT sector.

## A) Components for power electronics: A significant, growing market

Demand for the conversion of energy is growing, driven by energy efficiency requirements, the need to reduce total cost of ownership, weight, and other factors.

(in \$bn)



*Power device market*

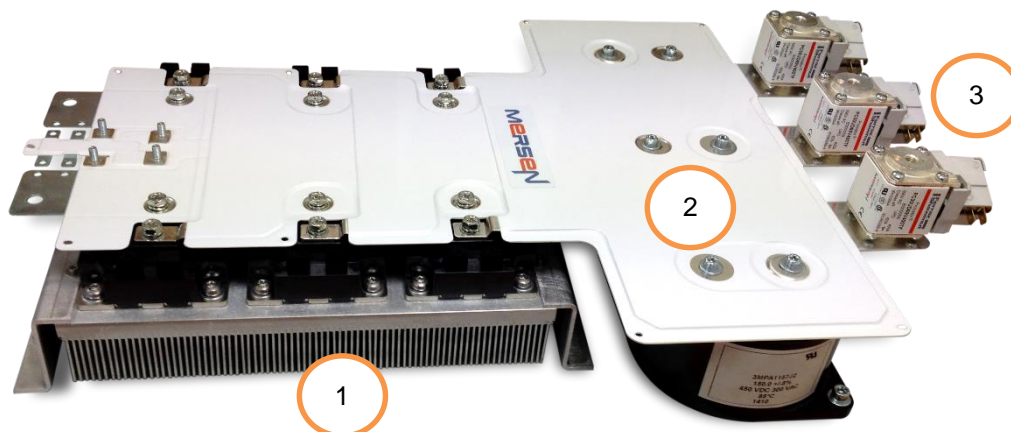
*Source: Yole (2016)*

## B) A unique bundle offer

Mersen's bundle offer gives it a superior ability to target the market. The offer comprises:

- 1- Cooling devices to reduce calories and increase semiconductor lifespan.
- 2- Laminated busbars to facilitate electrical connection, transfer electric current and reduce frequency noise.
- 3- Fuses to protect semiconductors from overvoltage and overcurrent.

Furthermore, the strong interaction among these 3 components makes this offer unique and position Mersen as a key partner in the power conversion market.



## C) Main customers

Mersen serves a number of customers around the world in different end-markets. It also supplies semiconductor manufacturers. The list includes (in alphabetical order):

### Industry and IT market

- ABB
- Eaton
- Fuji Electric
- GE
- Schneider
- Siemens

### Semiconductor manufacturers

- Fuji Electric
- Infineon
- Mitsubishi Electric
- Semikron
- Toshiba

Note: customers in the Energy and Transportation markets are listed in the relevant sections.

## Transportation

### Rail

Demand for urban transit systems is on the rise in the world's major cities. At the same time, high-speed transportation needs for intercity travel are also growing strongly. Rail represents one of the only viable long-term options, particularly in emerging markets.

#### A) Market

In 2015, the global rail market continued to expand by around 3% (despite a slowdown in Europe), depending on the market segment (rolling stock, infrastructure, maintenance and interoperability), and represented approximately €160 billion in volume. Network interoperability needs have grown by approximately 5%.

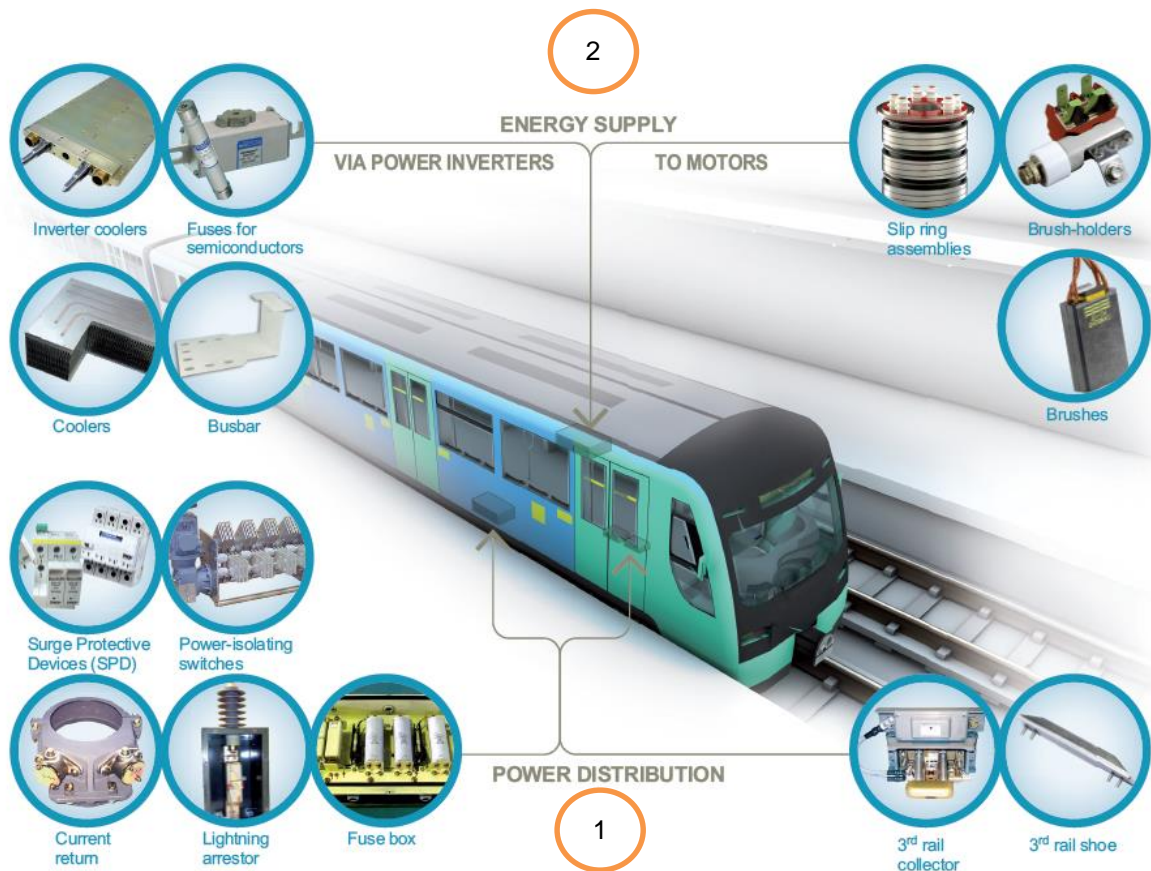
Subways and goods transportation showed the highest growth, in the order of 5 - 6%. Demand for high-speed trains has picked up after a slowdown that followed record equipment years in China, with growth of around 2%.

Western Europe remains the largest market in geographic terms, closely followed by Asia-Pacific and North America, which totaled nearly 65% of purchasing volumes in 2015. Investment in the Middle East-Africa regions is commencing, with no fewer than six subway lines under construction in Riyadh.

#### B) Solutions for both infrastructure and rolling stock

Mersen's solutions are used in both rail infrastructure and rolling stock to enhance efficiency, reliability and safety. Services and solutions include:

- Power distribution (1):
  - Current collectors and 3rd rail shoes
  - Fuses and SPDs (Surge Protective Devices) for overcurrent and surge protection
  - Power isolating switches and lightning arrestors for disconnection and safety
  - Current return for bearings protection
- Energy supply (2):
  - Brushes, brush-holders and slip ring assemblies for motors
  - Coolers, laminated busbars and fuses for semiconductors for power inverters



## C) Main customers

Mersen serves a number of railway traction system manufacturers and railway operators around the world, among them (in alphabetic order):

### Railway traction system manufacturers

- Alstom
- Bombardier
- Hitachi
- Kawasaki
- Rotem
- Siemens
- Sifang

### Railway operators

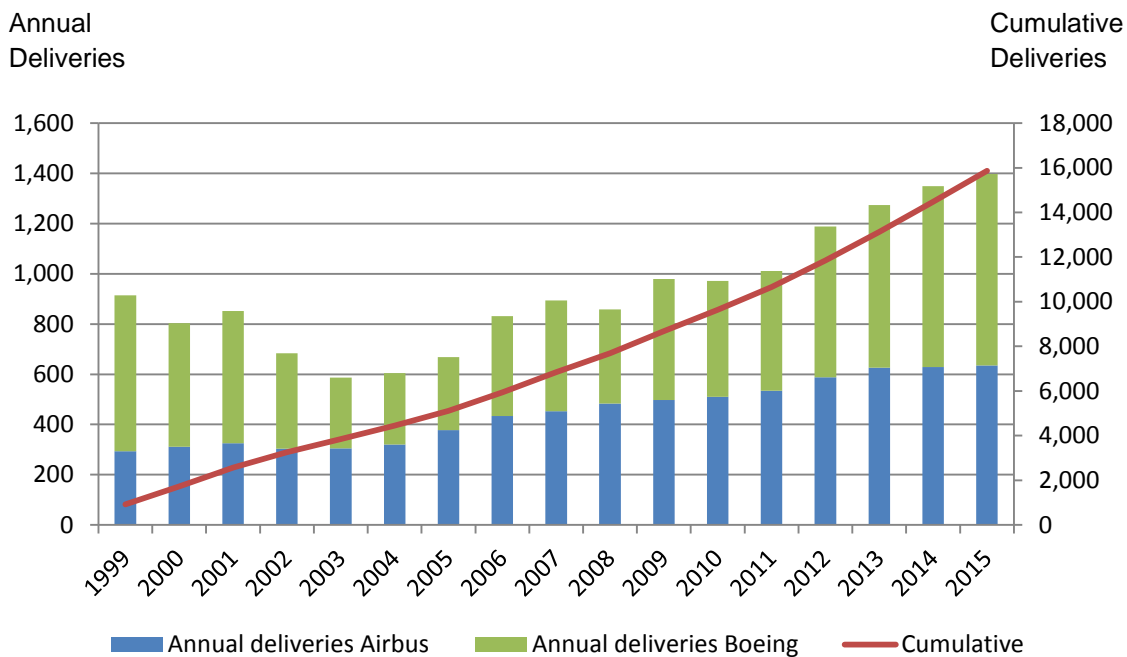
- China Railways Corporation
- Indian Railways
- London Underground
- NYCTA
- SNCF
- Trenitalia
- Vale

### Aeronautics

Over the last several years, growing passenger traffic and fleet renewal have led to an increase in demand for aircraft, as can be seen in the number of deliveries in the chart below.

The A380 was the first aircraft (A/C) to use more power electronics technology. This trend will continue as can be seen in the more electric aircraft (MEA) and more electric engine (MEE) concepts.

#### A) A growing market since 2003



Source: Airbus and Boeing (web sites)

#### B) New opportunities in a mature market

Mersen is a leading partner for the aerospace and aeronautic industries, where reliable components and materials are required to handle extreme environmental conditions and meet strict safety specifications.

Its offer consists of:

Products resistant to extreme temperature and abrasion

- Refractory components
- C/C products for brakes

Reliable components to meet stringent safety requirements

- Sealing components and materials
- Aerospace mechanical components
- Cooling for power electronics
- Carbon brushes for electrical rotating machines



In the area of aerospace propulsion, Mersen's materials and solutions are also essential in the production of key components such as turbo-reactor turbine blades made from special alloys:

- EDM (Electrical Discharge Machining)
- Metal processing

### C) Serving the major industry players

Mersen serves the major industry players around the world, among them (in alphabetical order):

- Airbus
- Boeing
- Bombardier
- General Electric
- Safran
- Thales

### Space

Optical and scientific instruments for space require precise and stable geometry under temperature variation. Mersen's expertise in sintered silicon carbide is a key technology, enabling to explore the universe.

More than 10 "all Boostec® SiC" telescopes are operational in space, including Herschel, the largest space telescope.

Mersen's main customer is Airbus Defense and Space.



## Corrosive Chemicals

The corrosive chemicals industry is a very demanding market requiring the most advanced materials and process skills.

Tens of thousands of chemical products are present in our day-to-day environment—in PVC construction materials, in polyurethanes used in the automotive industry, in silicones for adhesive labels, and in the high-performance plastics used in new technologies.

All of these chemicals are produced according to procedures using corrosive substances in high-temperature environments.

### A) A very large market with key end-drivers

Mersen offers equipment designed to meet the most stringent production requirements:

#### *Phosphoric acid*

Used primarily in the production of phosphate-based fertilizers, phosphoric acid is itself extracted from phosphate, a mineral found in natural deposits. This mineral is highly sought-after because the phosphorus that it contains carries the energy produced through photosynthesis in plants. As a result, phosphate-based fertilizers play a key role in enhancing farm productivity.

#### *Chlor-alkali*

The chlor alkali process is an industrial process for the electrolysis of sodium chloride. It is the technology used to produce chlorine and sodium hydroxide (caustic soda), which are commodity chemicals required by industry.

#### *Active pharmaceutical ingredients (API)*

API are the main substances in medicines giving them their therapeutic properties. Medicines contain one or more active ingredients associated with one or more excipients. There are three main stages to the pharmaceutical manufacturing process: production of active ingredients, their transformation into medicines and packaging. APIs are produced in high value-added product batches.

#### *Specialty chemicals*

The specialty chemicals industry synthesizes a very diverse range of products, from paints and flavorings to agrochemicals (plant health products). Unlike commodity chemicals where large volumes are produced in a continuous process, specialty chemicals are produced in small high-value-added batches in a reaction vessel. Synthesis reactions may be produced in a severely corrosive environment requiring corrosion-resistant equipment.

#### *Isocyanates*

Isocyanates are primarily used in the manufacture of polyurethane foam for applications including the construction and automotive industries. Isocyanates are produced in highly acidic and corrosive

environments at high temperatures. Sulphuric acid is recovered for concentration during the toluene nitration stage.

### Acid recovery and concentration

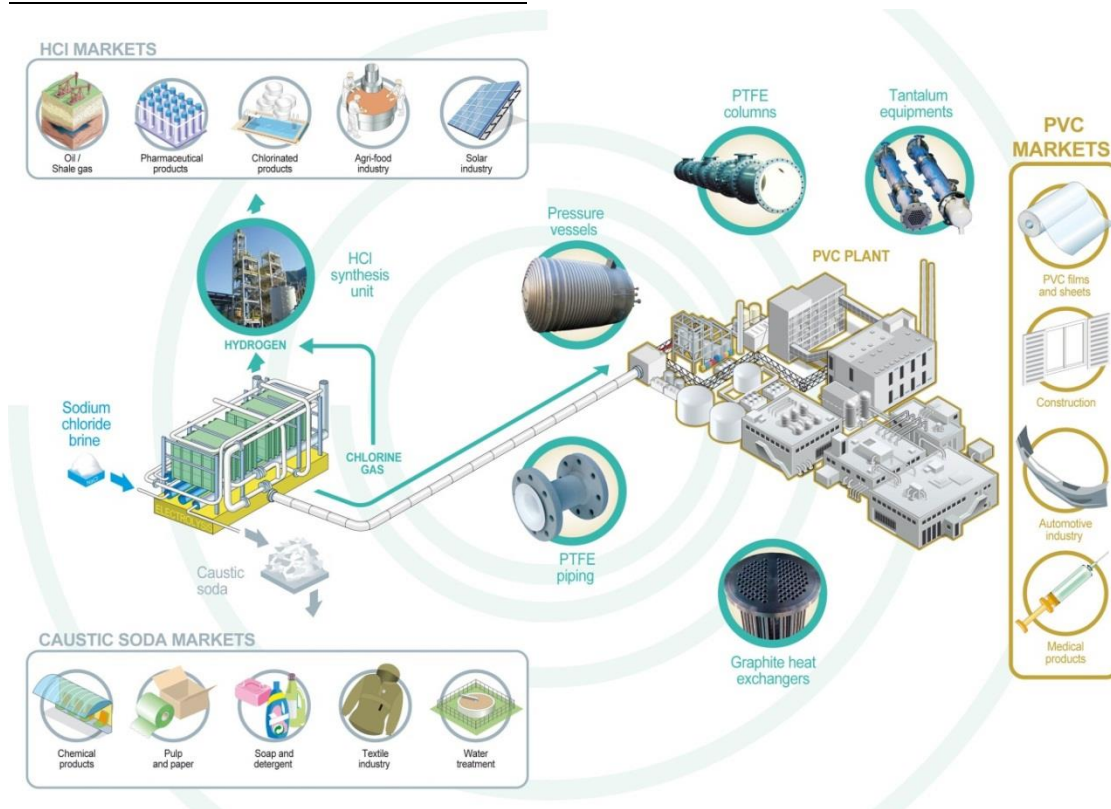
The recovery, regeneration and concentration of acids are important steps in numerous processes in the chemical industry. These acids, which are highly corrosive, may be sulphuric, hydrochloric or nitric acid. The processes of recovering, concentrating or purifying these mineral acids require equipment made of anticorrosion materials.

### B) Mersen's offering

As the world leader in anticorrosion industrial equipment, Mersen has strong expertise in chemical processes, thermal and mechanical design, corrosion and materials, welding and manufacturing processes. Its lineup includes:

- An extensive range of customized equipment (heat exchangers, columns, reactors, etc.) based on graphite and reactive metals (tantalum, zirconium, etc.) to process, mix and store highly corrosive and hot fluids, especially for fertilizers and pharmaceuticals.
- Pre-assembled systems combining synthesis units, columns and heat exchangers in a turnkey package to facilitate customer project management.

### Mersen in the chlor-alkali to PVC industries:



## C) Main customers

Mersen serves a number of customers around the world, including (in alphabetical order):

### Phosphoric Acid

- Foskor
- Hubei Yihua
- Ma'aden
- OCP

### Chlor-Alkali

- Akzo Nobel
- Kem One
- Oman Chlorine
- Sumitomo
- Union Chlorine

### Active pharmaceutical ingredients

- Glaxo
- Lanxess
- Merck
- Novartis
- Pfizer
- Roche
- Teva

### Specialty chemicals

- BASF
- Bayer
- DSM
- Evonik
- Monsanto

### Isocyanate

- Bordsochem
- Yantai Wanhua

### Acid recovery and concentration

- Noram
- Plinke
- QVF

## Process industries

Mersen is active in the process industries through both its materials and electrical business segments.

### A) Expertise from the materials segment

The materials segment brings its expertise in environments that require resistance to high-temperatures or corrosion or when high conductivity is needed:

#### Resistance to high temperatures

- Graphite parts for the glass industry
- Graphite for continuous casting of non-ferrous metals

#### Anti-corrosion

- Coke oven gas treatment
- Hydrometallurgy (including for rare earths)
- Oil & gas extraction processes (in particular shale gas)
- Surface treatment for metallurgy
- Water and wastewater treatment

#### Electrical conductivity

- Graphite parts for EDM (Electrical Discharge Machining), a manufacturing process used in the molding industry in which a desired shape is obtained using electrical discharges between two electrodes.

### B) Expertise from the electrical segment

The electrical segment contributes to the safety and performance of electrical installations and power electronics, making Mersen a key partner in a large number of industries.

We leverage the full range of our electrical product portfolio to serve these markets.

#### Signal & power transfer for motors and generators:

- Carbon brushes and brush-holders
- Slip ring assemblies
- Signal transfer systems

#### Power distribution and control:

- Fuses & Fusegears
- Surge protection devices
- High power switches and contactors

### Power electronics:

- Cooling devices
- Laminated busbars
- Semi-conductor fuses
- Surge protection devices

### Markets served include:

- Metallurgy: Electrical solutions for foundries and furnaces, hot and cold rolling mills and galvanic lines.
- Cement: Electrical solutions for DC motors, asynchronous motors with wound rotors in the processes of raw material extraction, crushing, grinding, cooking, cooling, etc.
- Rubber and plastics industry: Solutions designed for very specific operations (extrusion, injection, hot working, constant or variable speed, etc.)
- Mining: Solutions designed for the optimal performance of power shovels, draglines, loaders, dump trucks, underground equipment, etc.
- Pulp and paper industry: High-performance electrical solutions (for pulping machines, winders, rollers, driers, etc.), and mechanical and sealing solutions (for pumps and other systems)
- Assembly manufacturing: Optimized solutions and services for electrical rotating machines and power and signal transfer.

## APPENDICES

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**Consolidated income statement**

**Consolidated statement of financial position**

**Consolidated statement of cash-flows**

Data for 2015 and 2014 are presented in accordance with IFRS5, in light of the plan to divest an activity of brazing technologies.

## Consolidated income statement

(in millions of euros)	2015	2014	2013
<b>Consolidated sales</b>	<b>772.2</b>	<b>726.1</b>	<b>738.8</b>
Gross margin	231.7	221.6	213.4
<i>As a % of sales</i>	30.0%	30.5%	28.9%
Selling and marketing costs	(74.7)	(70.8)	(72.7)
Administrative and research costs	(96.5)	(89.1)	(81.2)
Other operating costs	(2.4)	(2.1)	0.3
<b>Operating income before non-recurring items</b>	<b>58.1</b>	<b>59.6</b>	<b>59.8</b>
<i>As a % of sales</i>	7.5%	8.2%	8.1%
Non-recurring income/(charge)	(22.7)	(38.0)	(50.5)
Operating income	35.4	21.6	9.3
Net finance income/(costs)	(10.0)	(9.9)	(11.0)
Income before tax	25.4	11.7	(1.7)
Current and deferred income tax	(19.1)	(9.1)	(23.1)
Net income from assets held for sale or discontinued operations	(3.7)	0.2	(3.8)
<b>Net income for the year</b>	<b>2.6</b>	<b>2.8</b>	<b>(28.6)</b>
<b>- Group share</b>	<b>1.3</b>	<b>2.1</b>	<b>(29.2)</b>
- Minority interests	1.3	0.7	0.6

## Simplified consolidated statement of financial position

in €million	Dec 31, 2015	Dec 31,2014	Dec 31,2013
Non-current assets	669.6	653.8	610.7
Inventories	168.2	162.4	154.3
Trade and other receivables	133.6	131.8	121.5
Other assets	8.4	4.8	16.3
<b>Total assets</b>	<b>979.8</b>	<b>952.8</b>	<b>902.8</b>
Liabilities and Equity	490.0	466.9	452.8
Provisions	12.6	23.4	13.6
Employee benefits	76.5	89.6	66.5
Trade and other payables	125.0	126.1	118.0
Other liabilities	39.2	30.8	39.9
Net debt	236.5	216.0	212.0
<b>Total liabilities</b>	<b>979.8</b>	<b>952.8</b>	<b>902.8</b>



## Consolidated statement of cash-flows

In millions of euros	2015	2014	2013
Income before tax	25.4	11.7	(1.7)
Depreciation and amortization	39.9	36.1	40.2
Additions to/(write-backs from) provisions	(8.7)	15.1	39.0
Net finance income/(costs)	10.0	9.9	11.0
Capital gains/(losses) on asset disposals and other	3.4	4.5	1.6
<b>Cash generated by operating activities before change in WCR</b>	<b>70.0</b>	<b>77.3</b>	<b>90.1</b>
Change in the working capital requirement	(5.5)	1.7	13.9
Income tax paid	(16.3)	(13.3)	(17.7)
<b>Net cash generated by continuing operations</b>	<b>48.2</b>	<b>65.7</b>	<b>86.3</b>
<i>Net cash generated by operating activities excluding exceptional items</i>	<i>73.0</i>	<i>79.0</i>	<i>86.3</i>
Cash generated by discontinued operations	(1.4)	(0.7)	(8.6)
<b>Net cash generated by operating activities</b>	<b>46.8</b>	<b>65.0</b>	<b>77.7</b>
Capital expenditure	(34.2)	(32.0)	(27.8)
Impact of changes in the scope of consolidation	(5.7)	(8.6)	(3.2)
Disposal of non-current assets and other	2.3	(0.7)	(6.6)
<b>Cash generated/(used) by operating and investing activities</b>	<b>9.2</b>	<b>23.7</b>	<b>40.1</b>
Net dividends paid to shareholders and minority interests	(10.5)	(10.0)	(3.7)
Interest payments	(9.5)	(9.3)	(10.7)
Increase in equity and other	(1.8)	(1.1)	(3.4)
<b>Net cash flow before change in net debt</b>	<b>(12.6)</b>	<b>3.3</b>	<b>22.3</b>



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